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Some slight scientific advantage sacrificed to broader aims.

THE SCIENTIFIC AND CULTURAL EXCHANGE

James McGrath

In a recent article in this journal [1] Mr. Amos Wylie takes some well-aimed pot shots at the weaknesses inherent in scientific exchanges with the USSR. He points out that Soviet scientists who come to the United States are almost always dedicated Communists following a carefully prearranged plan for collection of scientific intelligence of special interest to the USSR. He sees these scientific mercenaries, "backed by the full coercive power of the Soviet state," making substantial contributions to Soviet scientific intelligence, particularly in fields related to development of new weapons. On the other side of the coin, he cannot see that U.S. exchange scientists get anything like an even break information-wise when they confront the language barrier, the closed areas, and the closed laboratory doors of the USSR.

Let us grant at the outset that a very great deal of what Mr. Wylie says is true. The case against having scientific exchanges with the USSR can be backed up by many other facts than those he cites, and the Interagency Committee on Exchanges acknowledges in its most recent annual report on intelligence evaluations of the exchange program that the Soviets could have realized a slight net gain in scientific exchanges except in the field of atomic energy, where carefully negotiated exchanges were judged to have brought a net advantage to the United States. What, then, is the use of allowing Soviet scientists to come to the United States? Or is there any use?

The Larger Picture

The answer lies in part in an over-all look at the U.S.-Soviet cultural exchange program, which includes provision for the scientific exchanges and indeed could not have been negoti-

[1] *Studies* VI 4, p. 9 ff., "Unfair Exchange."

ated without them. The agreement for cultural exchanges with the Soviets, first signed in 1958, was renewed for the third time in March 1962. Under it, exchanges have taken place in industry, technology, agriculture, medicine, education, the performing arts, and sports, as well as science. In addition, we have exchanged motion pictures, magazines (*Amerika* and *USSR*), exhibits, and radio-television programs as part of the cultural exchange. Finally, the agreement has encouraged the development of tourism by Soviet and U.S. citizens visiting each others' country. According to State Department sources, 7,000 U.S. and Soviet exchangees have participated in over 615 exchange projects during the four years, the USSR has opened its territory to more than 35,000 American tourists, and 1,200 Soviet tourists have visited the United States.

We have to consider this whole cultural exchange program as an entity, recognizing that each side will look for profit in some areas and accept losses in others. For example, on the U.S. credit side, the program has made the territory of the USSR accessible to U.S. citizens in a way that could not have been imagined during the Stalin era. This has been an intelligence advantage, as well as helping to normalize relationships between the peoples of the two nations. Although, as Mr. Wylie says, we still deal with a regime which maintains strict control over the activities of its citizens, the U.S. policy of promoting exchanges is based on the hope that it will lead eventually to a still more relaxed attitude in the USSR.

We know that we risk losses in terms of technical and scientific know-how when we allow Soviet scientists to visit our laboratories and research institutes and talk with our leading scientists. But the losses can be and are minimized by, first, recognizing that this is a primary aim in the Soviet exchange strategy, and second, doing everything we can to reduce the risk. That the Soviet aim is recognized is evident in official pronouncements. In March 1961, President Kennedy, defending the program, voiced his caution:

> We are of course concerned that [exchanges] will be reciprocal and national security will be protected. . . .

The State Department similarly says in its April 1962 *Review of Exchanges:*

> As far as exchanges with the United States are concerned, Soviet primary goals appear to be twofold: To obtain scientific and technical information, and to paint a favorable picture of the Soviet Union and Soviet politics. . . . Because the United States is aware of this [first] goal it is able to take adequate steps against a one-way flow of information.

In his commentary on the damaging effects of scientific exchanges with the Soviets, Mr. Wylie has not recognized the very considerable amount of checking, examining, and evaluating that is brought to bear on each and every such exchange. CIA, and in particular its Office of Scientific Intelligence and Office of Research and Reports, plays an important part in this process. The CIA opinions on a given exchange, often along with opinions of other elements of the intelligence community and the Department of Commerce, are coordinated into one intelligence estimate for submittal to the State Department by the Interagency Committee on Exchanges. The State Department considers these intelligence judgments in making its decision to accept or reject an exchange, scientific or otherwise.

A Case History

That vigilance in the matter of scientific exchanges is exercised by all concerned is illustrated in a series of incidents which occurred in 1962. The curious train of circumstances began in January when heavy pressure was brought to bear on the Computing Center at New York University by Soviet scientist A. A. Dorodnitsyn, Director of the USSR Academy of Sciences Computing Center, to accommodate two Soviet scientists for a two-month exchange visit. This was followed in rapid succession by a request from a Soviet student to attend the Western Joint Computer Conference in Los Angeles, a letter to Professor James Robertson at Illinois University asking about his willingness to receive one A. V. Petrosian, described as a "Yerevan scientific worker," for extended study at Illinois on computer technology, and a request by a Soviet educational exchange delegation to add the IBM headquarters at Rochester, New York, to its U.S. itin-

erary. The last request was unique in that a Soviet Embassy official by-passed the State Department and went directly to IBM with it.

The series reached a climax when the Soviets proposed that economic expert M. M. Golansky, coming to the United States as an exchange visitor sponsored by the American Council of Learned Societies, be permitted to follow an extensive itinerary calculated to get him into areas where he could observe applications of computer technology to economic planning. Mr. Golansky, moreover, a very competent man in his field, had a record of involvement with the Soviet intelligence services.

Although the Department of State of necessity handled each of these proposals separately vis-à-vis the Soviets, inside the government they were treated as a concerted Soviet effort to get needed information on all aspects of U.S. research in automation and computer technology. In view of the USSR negotiators' having refused to include an exchange of automation specialists as part of the 1962–63 exchange agreement, the Soviet play appeared to be an attempted end run on the exchange program. After checking intelligence opinions on the matter, the State Department took the following actions:

- Informed the Soviets that the proposed visit of two scientists to the NYU computer center must be held up pending a review of reciprocity requirements. To date, despite continued pressure from the Soviets, this visit has not been approved.
- Declined to allow the Soviet student to attend the Western Joint Computer Conference.
- Took no action on the "Yerevan scientific worker's" request for admission to Illinois University pending an examination of reciprocity requirements.
- Reduced Dr. Golansky's itinerary to a brief swing through certain eastern university computer centers doing completely unclassified research.
- Refused the Soviet Educational Exchange delegation's request for a visit to IBM's Rochester plant and informed the Soviet Embassy that future requests of this kind were to be addressed to the State Department, *not* directly to a U.S. industry or research laboratory.

From this history one can see that the State Department, having assembled the necessary background information, acted promptly and vigorously to blunt the Soviet drive to exploit the exchange agreement to its own advantage. One instance, of course, does not prove that we are always successful in identifying such Soviet moves and taking prompt and effective action. But it does illustrate that a working system has been devised for assimilating information and acting on it in the best interests of the nation.

Uncounted Blessings

We know that the Soviets expose their closed society to the unpredictable impact of cultural exchanges with the United States and other Western nations (France, West Germany, Sweden, and the United Kingdom also have exchange treaties with them) in order to get a crack at the latest developments in Western science and technology through scientific exchanges. In pursuit of that end they will continue to send to the United States mission-minded scientists and dedicated Communists like Dr. Yuri Popov, who, as Mr. Wylie says, "was probably instructed to absorb as much information as possible" in the maser-laser field. At least some of the information they get will be balanced by the findings of U.S. scientists visiting the Soviet Union under the scientific section (II) of the exchange treaty. A similar balance is maintained by delegations exchanged under Sections III through VI of the agreement, covering industry, transport, construction and trade, agriculture, public health, and education. Sections VII through XII, however, covering the performing arts, cinematography, publications, exhibitions, radio and TV programs, governmental affairs, civil, social, and cultural groups, athletes, and tourism, which have as their objective a lowering of the barriers erected by the Soviet Union against the West, are not subject to this kind of exploitation; and it is apparent that even the USSR recognizes that the advantage rests here with the United States. These sections, while they are not considered in the annual determination of net intelligence advantage, certainly loom large in a general appraisal of the program.

Not only the scientific exchanges but all those under Sections II through VI of the agreement are submitted by the Department of State to all interested government agencies for comment. The intelligence community plays a major role in this appraisal, and its technical advice and suggestions are largely followed by the Department. As in any negotiation between adversaries, each must yield at some points and stand firm at others. The programs arranged under the scientific section, as under any other, represent in general the best bargain obtainable in the opinion of those parts of the U.S. government charged with implementing the policy on exchanges.

Almost any scientific or industrial field can be related to war and weaponry. Every effort is made to isolate our visitors from applied research and development and restrict their exploration to basic science. We believe this effort is largely successful. A still more restrictive posture would result in retaliation that would prove generally disadvantageous and might lead to the virtual elimination of U.S.-USSR exchanges. It is difficult to visualize a better procedure than that now used to ensure our getting the greatest possible benefit from the program. Our performance under this procedure, as in all other human endeavors, can almost certainly be improved. But so long as we are not providing important assistance to the Soviets in critical matters and are successful in keeping scientific exchanges somewhere nearly in balance, it is reasonable and prudent to consider the program on an overall basis and not draw large conclusions from individual examples.